REMARKS

This paper is responsive to the Advisory Action dated June 19, 2006 and to the Final Office Action dated March 3, 2006 (the "Final Office Action").

Claims 38-70, 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205, and 207-218 were previously pending in the application.

No claims have been added or canceled.

Claims 111, 124, 137, 150, and 213 have been amended.

Accordingly, claims 38-70, 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205, and 207-218 remain pending.

Claims 38-70, 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205, and 207-218 stood rejected in the Final Office Action.

Claims 38-70 stood rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,687,168 issued to Iwata ("*Iwata*") in view of U.S. Patent No. 5,649,108 issued to Spiegel et al. ("*Spiegel*"). Claims 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205, and 207-218 stood rejected under § 103(a) as being unpatentable over U.S. Patent No. 6,490,246 issued to Fukushima et al. ("*Fukushima*") in view of *Spiegel*. Applicant offers that the pending claims are allowable in view of the remarks presented herein.

Formal Matters

The Final Office Action is silent regarding the limitations of Applicant's various dependent claims 39-70, 113-123, 126-136, 139-149, 152-162, 165-176, 179-190, 193-204, and 207-218. Nonetheless, the Final Office Action includes rejections of the dependent claims under § 103(a). As discussed below, the Final Office Action appears to have misapplied the standard of patentability under § 103(a) with regard to the rejections of the dependent claims.

Since the Final Office Action does not present any substantive arguments to support the rejections of the dependent claims, Applicant is unable to present a substantive rebuttal to these rejections in this paper. At this time, Applicant asserts that the rejections of the dependent claims are improper because they are not supported by any valid reasoning to explain the rejections under § 103(a). In particular, the rejections of the dependent claims do not even appear to assert that any of the limitations of the dependent claims may be found in the cited references. Applicant thus maintains that the dependent claims are allowable under § 103(a), because Applicant does not find the limitations of these claims in the cited references, whether taken individually or in combination, and because the Final Office Action does not provide grounds for the rejections under § 103(a) of these claims.

<u>*Rejections Under 35 U.S.C. § 103(a)*</u>

Claims 38-70 stood rejected under 35 U.S.C. § 103(a) as being unpatentable over *Iwata* in view of *Spiegel*. Applicant respectfully submits that the claims are allowable because a person having ordinary skill in the art would not have a motivation to make the proposed combination of references, and further because the cited art does not teach each limitation of the pending claims.

Applicant's independent claim 38 reads as follows.

38.   (Previously Presented) A networking protocol for a network comprising:
a protocol packet, wherein
  said protocol packet is sent from an origin node to a target node,
  wherein said protocol packet is sent to neighbors of said origin node to find the
    target node,
  said protocol packet is configured to record a protocol packet path from the origin
    node to the target node, and
  said protocol packet path information comprises information regarding a topology
    of at least a portion of said network.

Applicant notes that various limitations of the pending claims are not disclosed in the cited art. The Final Office Action proposes that the first ATM switch 11 in *Iwata* corresponds to an origin node, the third ATM switch 13 corresponds to a neighbor of the origin node, and the fourth ATM switch 14 corresponds to a target node. The Final Office Action further proposes that the Hello packet depicted FIG. 7 of *Iwata* corresponds to a protocol packet. Final Office Action at 2. Claim 38 requires that **the protocol packet is sent to neighbors of the origin node to find the target node**.

The Final Office Action proposes that this limitation is met by the transmission of the Hello packet in *Iwata*. Applicant respectfully disagrees.

Application No.: 09/751,999

This limitation of claim 38 is absent from the cited art. In order to meet this limitation, the Hello packet of *Iwata* would need to be sent from the first ATM switch 11 to the third ATM switch 13 to find the fourth ATM switch 14—as would be logically dictated according to the proposed correspondence of elements set forth in the Final Office Action.

However, such a function of the Hello packet is not taught in *Iwata*. According to the cited reference, the Hello packets in *Iwata* are used to discover the addresses only of adjacent switches in a network of ATM switches.

> Each ATM switch obtains ATM addresses of the adjacent ATM switches by exchanging Hello packets based on a Hello protocol. The Hello protocol is a transmission procedure employed between the adjacent ATM switches. This procedure, the Hello packet is transmitted and received per the physical link provided between adjacent switches.
>
> In the Hello packet, both ATM address of the own ATM switch and ATM address of the adjacent ATM switch are described. Therefore, it becomes possible to obtain the address of the ATM switch connected to the other end of the physical link, respectively. By this, each ATM switch can recognize neighbor topology between itself and the adjacent switch, namely the connecting condition of each links between adjacent switches.

Iwata at col. 4, lines 14-26.

While the Hello packets are exchanged between adjacent nodes in *Iwata*, the exchange is performed in order to recognize the neighbor topology between switches and their respective adjacent switches. The Hello packets are not used to find a target node. Indeed, the *Iwata* Hello packets would generally be incapable of finding a remote target node in a network, since they are exchanged only between adjacent ATM switches.

Application No.: 09/751,999

In particular, the exchange of Hello packets between adjacent nodes as described in *Iwata* is insufficient for meeting the limitation whereby the protocol packet is sent to neighbors of a origin node to find a target node. At best, the Hello packets in *Iwata* may be useful for monitoring whether a connecting condition of a link experiences some variation, such as in situation where links to adjacent ATM switches are cut off or new links are established. *Iwata* at col. 7 line 66—col. 8 line 12, col. 9 lines 6-9. More particularly, since the Hello packets are exchanged between adjacent ATM switches, **Iwata does not teach that the Hello packet is sent from the first ATM switch 11 to the third ATM switch 13 to find the fourth ATM switch 14.** According to proposed the correspondence of elements in the Final Office Action, such a teaching would be logically required in order to meet the limitations of "said protocol packet is sent from an origin node" and "said protocol packet is sent to neighbors of said origin node to find the target node." These limitations are therefore not disclosed in *Iwata*. Since these limitations of independent claim 38 are absent from the cited art, claim 38 and all claims dependent therefrom are allowable under § 103.

Further, the references do not set forth a motivation for the proposed combination of references. As noted in the Final Office Action, *Iwata* does not disclose a protocol packet configured to record a protocol packet path from an origin node to a target node. Final Office Action at 2. The Final Office Action proposes, however, that this limitation may be found in *Spiegel*, and that these references may be combined under § 103. The proposed motivation for this combination is "to setup network topology in network nodes as well as link status." Final Office Action at 3.

Applicant respectfully submits that the Final Office Action does not provide an adequate motivation for the proposed combination of references. To establish a *prima facie* case of

obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In this case, Applicant does not see the proposed motivation in the cited art. Neither reference proposes that any other reference would be needed to achieve the proposed goal "to setup network topology in network nodes as well as link status."

Still further, it is not clear that the combination of references would be needed for the proposed goal. By itself, *Iwata* describes techniques for determining link status (e.g. using Hello packets) and for managing topology in a network system (e.g. using abstracted-link state information). Applicant submits that a person having ordinary skill in the art would recognize that *Iwata* does not need to be combined with *Spiegel* in order to achieve the goal proposed in the Final Office Action. Accordingly, a person having ordinary skill in the art would not have a motivation to make such a combination of *Iwata* and *Spiegel*. For this additional reason, claim 38 and all claims dependent therefrom are further allowable under § 103.

Claims 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205, and 207-218 stand rejected under § 103(a) as being unpatentable over *Fukushima* in view of *Spiegel*. Applicant respectfully submits that the claims are allowable because a person having ordinary skill in the art would not have a motivation to make the proposed combination of references, and further because the cited art does not teach each limitation of the pending claims.

Application No.: 09/751,999

Various limitations of the claims are not disclosed in the cited art. For example, independent claim 111 recites a method that includes a protocol packet sent from a sending node to a downstream node. As amended, the claim includes **a link state advertisement packet that includes at least one node identifier that identifies a node in a network for which the sending node seeks a link state advertisement.** This limitation is not disclosed in the cited art.

With regard to this limitation, the Final Office Action cites the following portion of *Fukushima*.

More specifically, in OSPF, each router exchanges information with all other routers by using packets called routing protocol packets. Each router periodically transmits packets called Hello packets, a kind of routing protocol packet, to the network. **A Hello packet includes the router's own ID**, and the identity of the network to which the router is connected, and a list of other routers' ID's connected to the same network to which the router is connected. The other routers' ID's placed in the above list include the other routers' ID's of which the router was made aware by Hello packets received from other routers.

If a router receives a Hello packet, which includes its own ID, from another router that the router has been aware of, on the understanding that the two routers have become aware of each other, the two routers exchange network link-state information by sending routing protocol packets.

Network link-state information includes the ID of the advertising router, the identity of the network to which the advertising router is connected, the addresses of the interfaces through which the advertising router is connected to the networks, and the costs of the interfaces. The cost of an interface means the cost which is incurred when the interface is used to forward packets and which is set by the network administrator.

Fukushima at col. 1 lines 44-67 (emphasis added). As noted in the Final Office Action, the Hello packet transmitted by a router includes the router's own ID. The Final Office Action proposes

that this ID corresponds to the "at least one node identifier" from Applicant's claim 111. Final

Office Action at 3. However, the Final Office Action proceeds in the same paragraph to propose

that this ID **also** "identifies a node in a network for which said sending node seeks a link state

advertisement." This limitation is simply not present in the cited portion of *Fukushima*. First,

the cited material does not teach that the Hello packet (or any other packet) includes an

identifier of a node for which the sending node seeks a link state advertisement.

Additionally, the proposed element of *Fukushima* (the sending packet's router ID) certainly does

not meet this limitation, since if it did the consequence would be that the router in *Fukushima* is

seeking a link state advertisement from itself. *Fukushima* does not teach such an unnecessary

and wasteful communication, and no person having ordinary skill in the art would comprehend

Fukushima as setting forth such a communication. Accordingly, the cited references do not

disclose a link state advertisement packet that includes at least one node identifier that identifies

a node in a network for which the sending node seeks a link state advertisement. At least for this

reason, independent claim 111 and all claims dependent therefrom are allowable under § 103. At

least for similar reasons, independent claims 124, 137, and 150 and all claims dependent

therefrom are also allowable under § 103.

Independent claim 163 includes a limitation of sending an acknowledgement to said

downstream node "**wherein said acknowledgement acknowledges all link state**

advertisements in said hello packet." The Final Office Action is silent with regard to this

limitation. The Final Office Action does not propose that any of the cited references teach,

describe, or suggest sending an acknowledgement that "acknowledges all link state

advertisements in said hello packet." Applicant also does not find this limitation in either

Fukushima, *Spiegel*, or *Iwata*, and respectfully submits that this limitation is not present in the

cited art. At least for this reason, Applicant respectfully submits that independent claim 163 and

all claims dependent therefrom are allowable under § 103. At least for similar reasons, independent claims 177, 191, and 205 and all claims dependent therefrom are also allowable under § 103.

The Dependent Claims

The Final Office Action did not address the numerous limitations presented in the dependent claims. Rather, the Final Office Action merely concludes that "**Claims 39-70 are rejected because they depend on their parent claim 38.**" Final Office Action at 3. Similarly, the Final Office Action also concludes that dependent claims 113-123, 126-136, 139-149, 152-162, 165-176, 179-190, 193-204, and 207-218 are rejected because they depend on their respective parent claims. *Id.* at 4-5. The rejections are ostensibly based upon § 103(a). *Id.* at 2-5.

Applicant respectfully submits that the Final Office Action misapplied the standard of patentability under § 103(a). Applicant respectfully submits that a dependent claim may only be deemed unpatentable under§ 103(a) if it is shown that each limitation of the claim is disclosed in the cited art. The Final Office Action made no such showing for Applicant's dependent claims. Indeed, the Final Office Action fails to discuss any of the limitations set forth in the dependent claims. Applicant asserts that the rejections of the dependent claims are improper because they are not supported by valid reasoning under § 103(a). Further, Applicant asserts that the limitations of the dependent claims are not disclosed in the cited art. Accordingly, for this reason as well, Applicant respectfully submits that dependent claims 39-70, 113-123, 126-136, 139-149, 152-162, 165-176, 179-190, 193-204, and 207-218 are further allowable under § 103(a), and respectfully requests that the rejections under § 103(a) of these claims be withdrawn.

Application No.: 09/751,999

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5097.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on July 3, 2006.

_____ _____
Attorney for Applicant   Date of Signature

Respectfully submitted,

Cyrus F. Bharucha
Attorney for Applicant
Reg. No. 42,324
Telephone: (512) 439-5097
Facsimile: (512) 439-5099

Application No.: 09/751,999